KIT CENTRAL 8

USER'S GUIDE

ENGLISH VERSION

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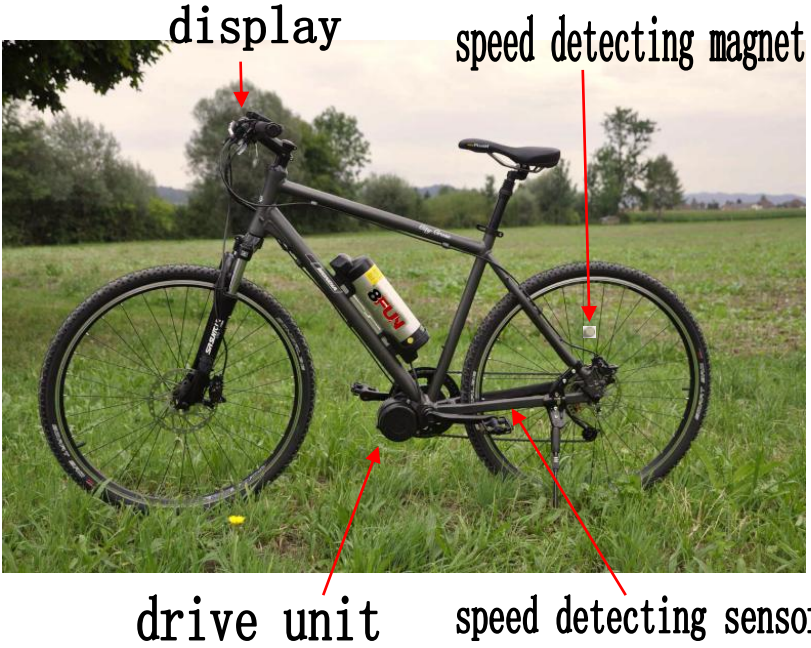
System composition



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1 Central motor

★ Can be installed on standard bike frame easily.

★ High starting torque, Max torque≥80Nm, good performance on climbing.

★ Double clutch is used on drive unit, more safety.

★ Speed sensor and torque sensor can be applied, controller integrated.

★ High efficiency, low consumption, long travel mileage.

1.1 Scope of application and numbering rule

Countermark serial number on motor casing as following:

BBS01 36V 250W

15A 25km/h

13010001

1. “BBS01”: motor type(speed sensor)；”BBS02”: motor type(speed sensor with coaster brake)；”BBT": motor type (torque sensor)
2. “36V”: rated voltage; 250W: rated power.
3. “15A”: limited current, 25km/h: max speed.
4. “1301”: production date, produced in January of 2013.
5. “0001”: serial number.

1.2 Material and waterproof grade

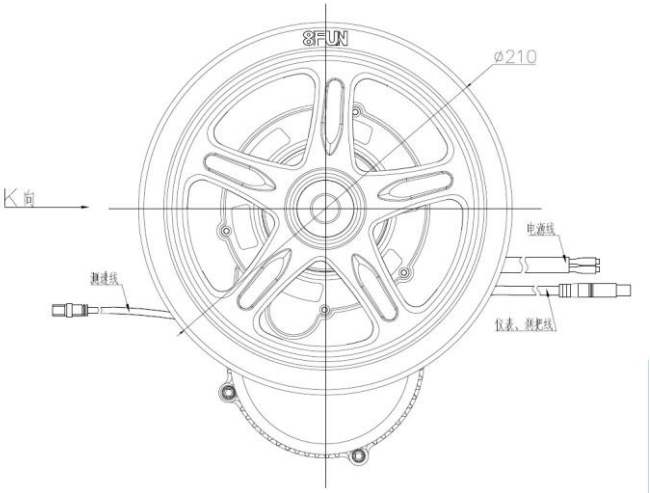
Die-cast aluminum electrophoresis black treatment, working environment temperature:-25℃-55℃, waterproof grade: IP65.

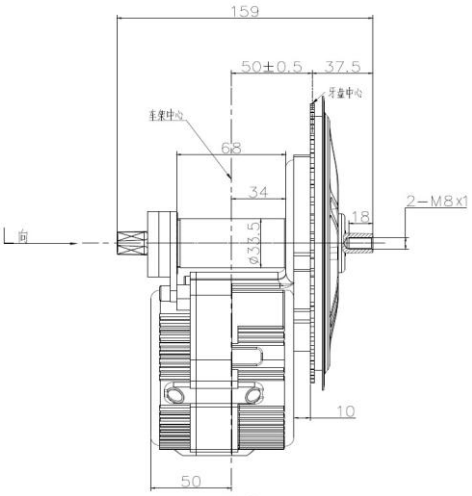
1.3 Main technical parameters

Voltage		DC36V						
Limit current		15A						
Limit speed		25KM/H						
Motor weight		3.7KG						
no-load value		Rated value					Max value	
current（A）	speed（RPM）	Output power（W）	speed（RPM）	efficiency（%）	torque（Nm）	current（A）	MAX torque	MAX efficiency（%）
≤1.0	83±5	250	78±5	≥80%	≥30	≤9	≥80N.m	≥80%

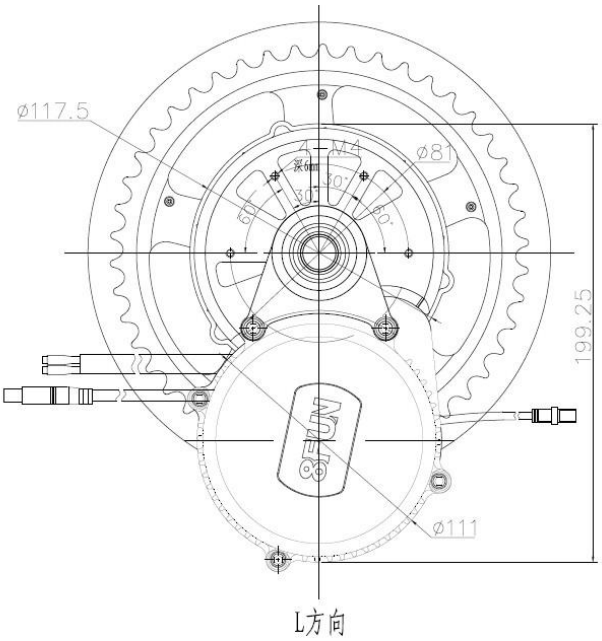
Above parameters as the default parameters, can be customized according to customer requirements.

1.4 Installation diagram

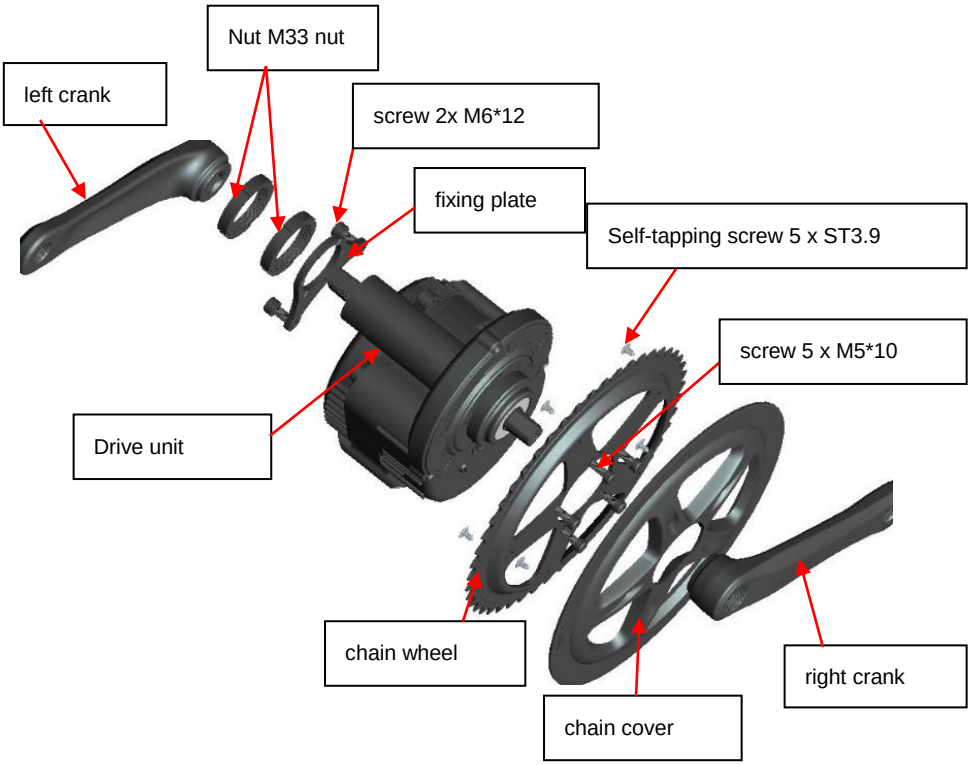



159
50±0.5
37.5
牙盘中心
链条中心
68
34
2-M8x1
18
向
Ø33.5
10
50

K方向

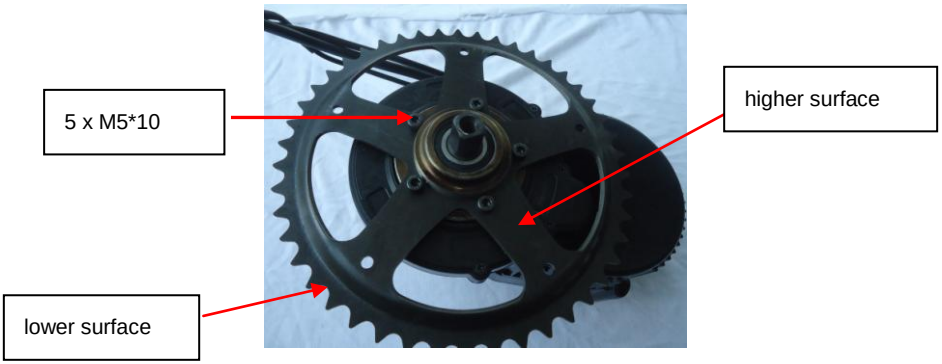

Ø117.5
4-M4
深6mm
Ø81
30°
30°
30°
199.25
Ø111

L方向



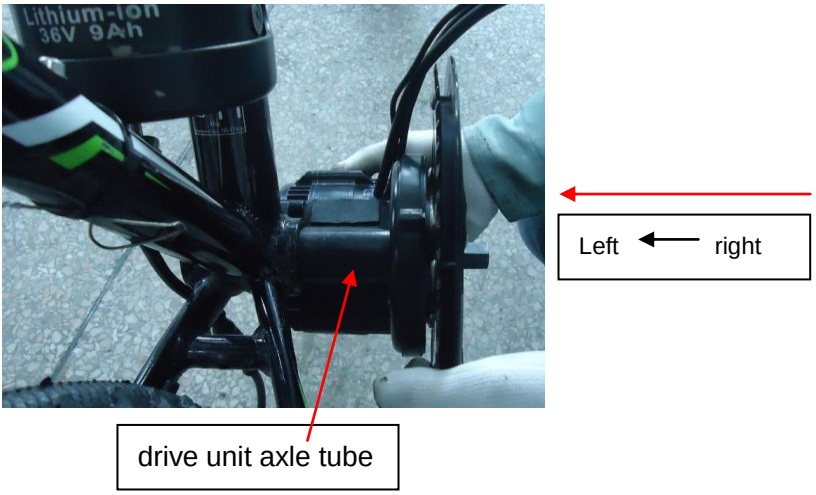
1.5 Installation procedure

1. Open the package and take out the drive unit and accessories; And check the specification whether it is correct.
2. Fix the chain wheel on drive unit with 5pcs screw M5*10, (see picture 1), then fix chain cover on chain wheel with 5pcs screw ST3.9.

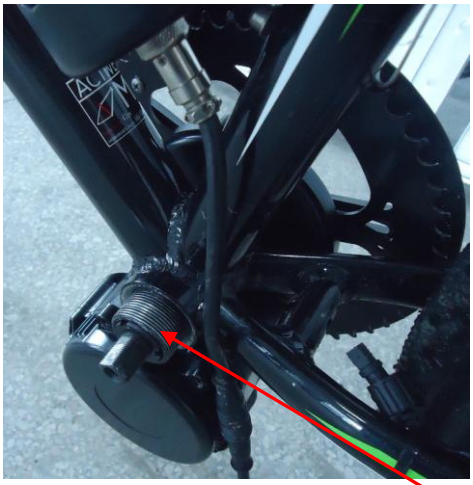


Picture1

3. Fix the drive unit axle tube on frame bottom bracket (see picture 2,picture 3)



Picture 2



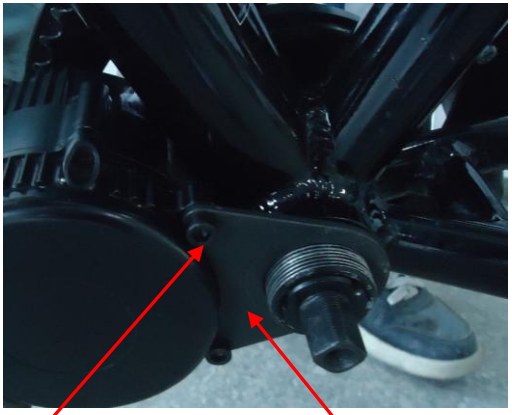
Picture 3

ensure thread of axle tube extend bottom bracket more than 10mm

4. The surface with teeth of fixing plate towards inside, then fix the plate on drive unit with 2pcs M6*10.(see picture 4,picture 5)

the surface with teeth of fixing plate

Picture 4

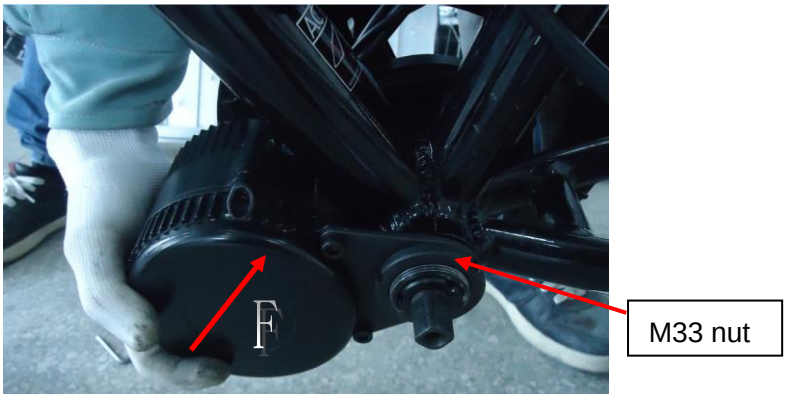


2xM6 nut

Outside surface without teeth

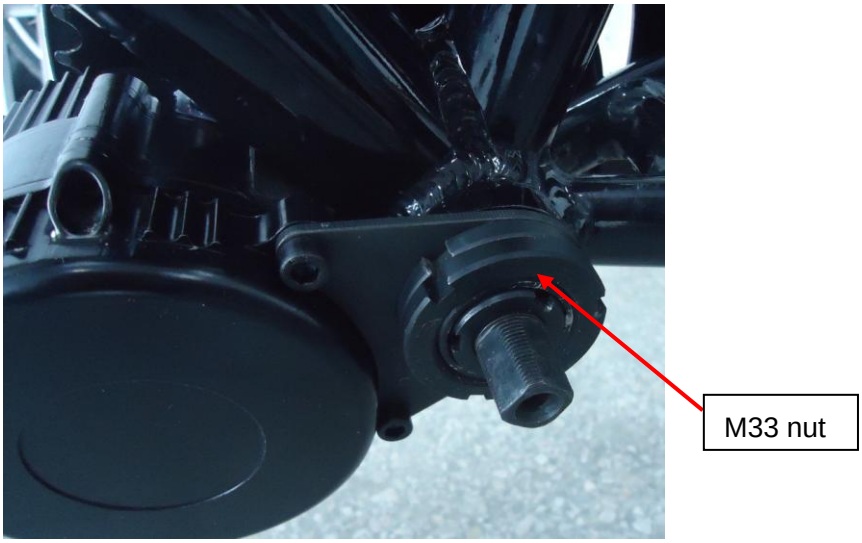
Picture 5

5. Hold the drive unit near to bicycle fork, force less than 5KG, tight 1st nut M33 onto axle tube with force:30-40N.m (see picture 6)



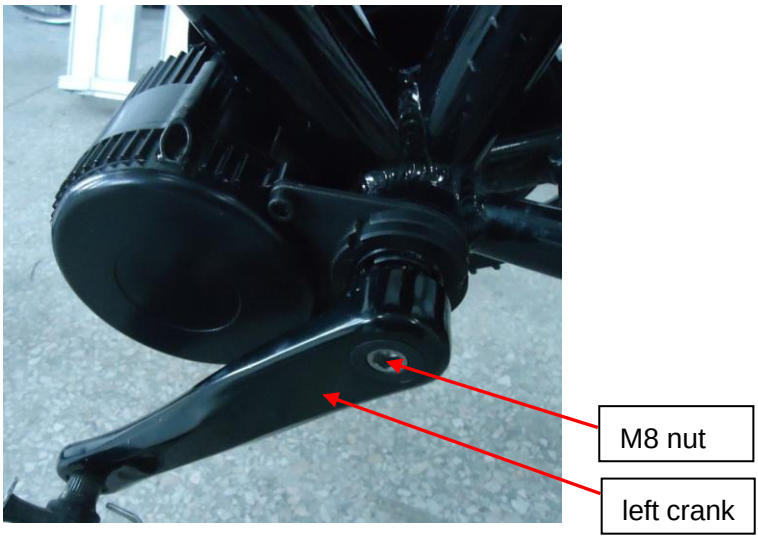
Picture 6

6. Fix 2nd nut M33 onto axle tube, tightening force:30-40N.m(see picture 7)



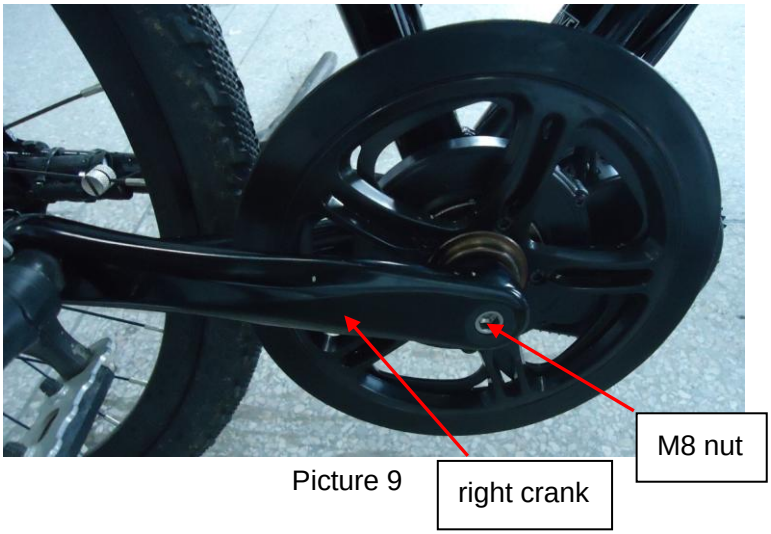
Picture 7

7.Fix the left crank on the bike with M8 inner hexagon screw. Tightening force:35-40N.m (see picture 8)



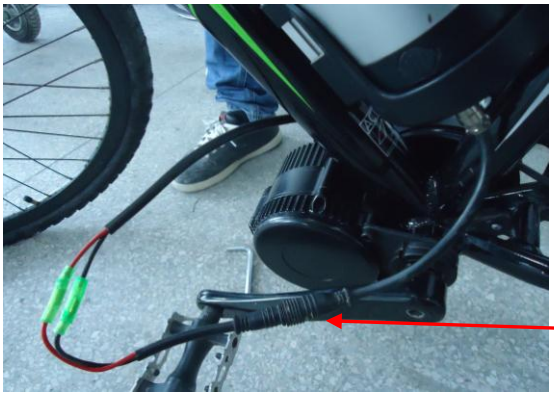
Picture 8

8.Fix the right crank on the bike with M8 inner hexagon screw. Tightening force:35-40N.m (see picture 9)



Picture 9

9.Connect all cables for battery, display, speed detecting sensor and so on (see picture 10-12)



Water proof connector for battery

Water proof connector for display

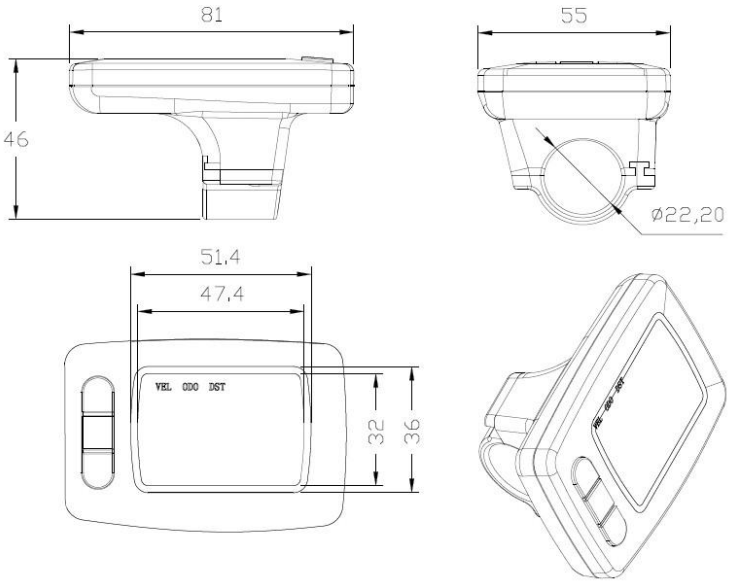
Water proof connector for speed detecting sensor

2 C950 Display

2.1 Material and waterproof grade

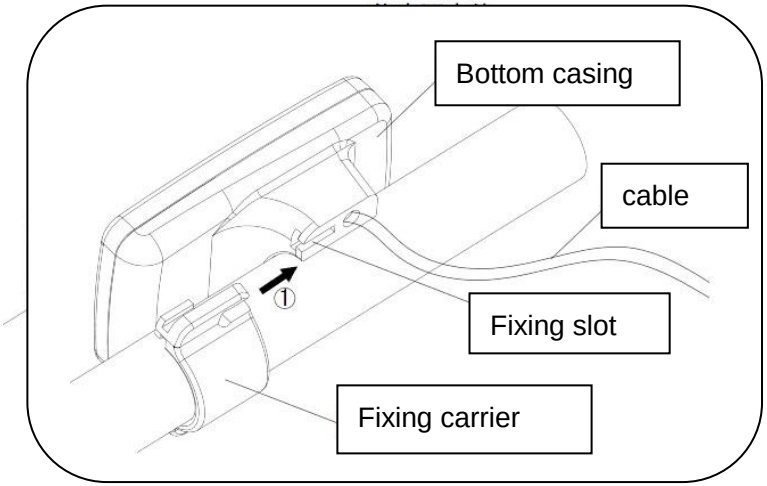
Display's casing use black/silver ABS materials, display window use acrylic white transparent material.
Working temperature of display: - 20℃- 80℃.
Waterproof grade: IP65.
Ultrasonic is used for welding casing and display window.

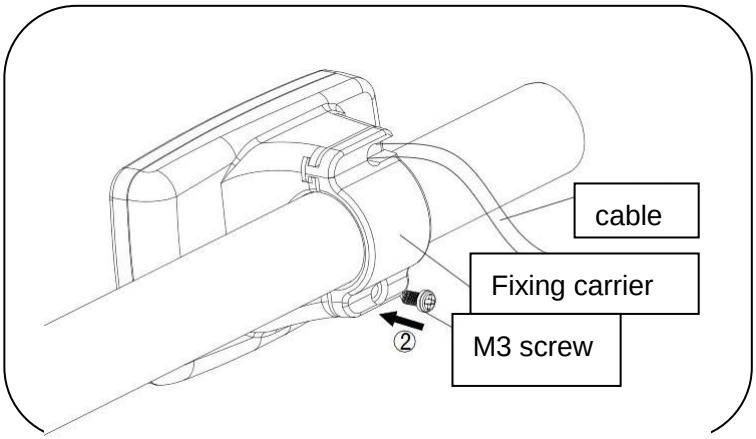
2.2 Dimension (unit: mm)



2.3 Installation instruction

Fix the display onto the handlebar and adjust to an appropriate visual angle, use a screw to fix the carrier onto bottom casing, then plug display connector with controller connectors, that's all.





2.4 Button definition

C950 display is equipped with integrated buttons. The three buttons are installed on the left side. The shape and location is as below:

System power switch

Mode selection, together with for setting

back light switch, speed, mileage switch

2.5 Display Area

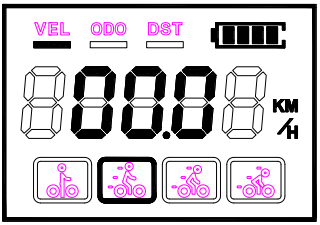
Display area includes battery capacity, riding mode, riding speed, single riding distance, total riding distance, and malfunction code of the electronic control system. Display area is as below：

Mode 1：walking assistant mode
Mode 2：economic mode
Mode 3：sports mode
Mode 4：power mode

2.6 Power on

First open the electric vehicle battery power.

Then press to open system power（display below black font when power on）



press

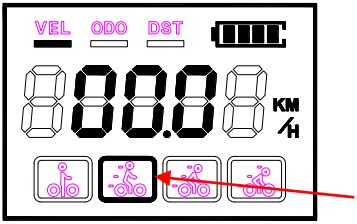
and choose favorite mode（refer to 2.7.1）

2.7 Adjustment

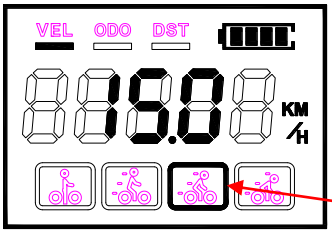
2.7.1 Mode selection

When e-bike power on, default mode is economic mode, press

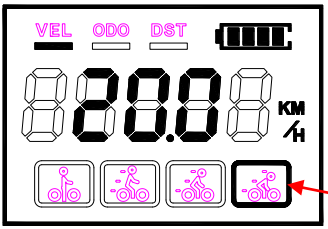
0.5s to select mode, economic mode, sports mode and powerful mode will be cyclic in order as following:



economic mode



sports mode



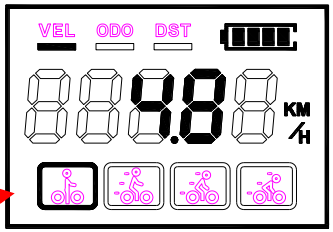
power mode

2.7.2 Walking Assistant

Hold

to enter walking assistant mode. The e-bike will go on at a uniform speed below 6 KM/H. Release

, the e-bike goes back to previous state, interface is as below:



Walking assistant mode

Warning：walking assistant function can only be used when the user is pushing the e-bike. Please don’t use this function during riding.

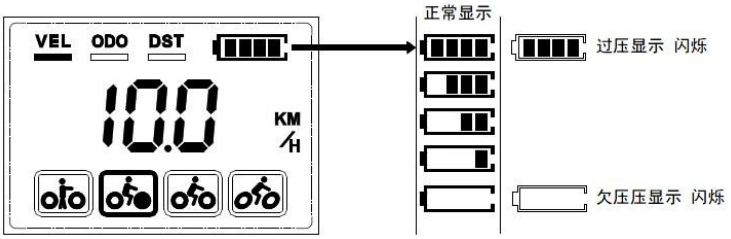
2.7.3 Backlight turn On/Off

When the surrounding light is not enough or in the evening,turn on the backlight. Hold 0.5s to switch on the backlight. Hold 0.5s again to switch off the backlight.

2.7.4 Electric capacity display

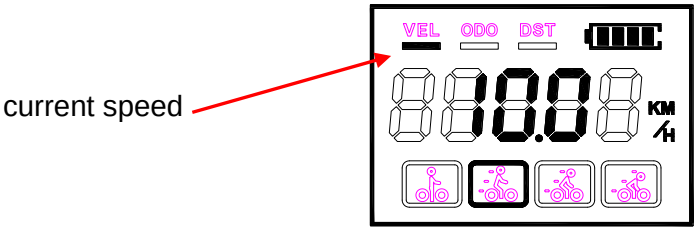
When the battery capacity is overvoltage, the four battery segments are all lighted and the battery display frame will flash. When the

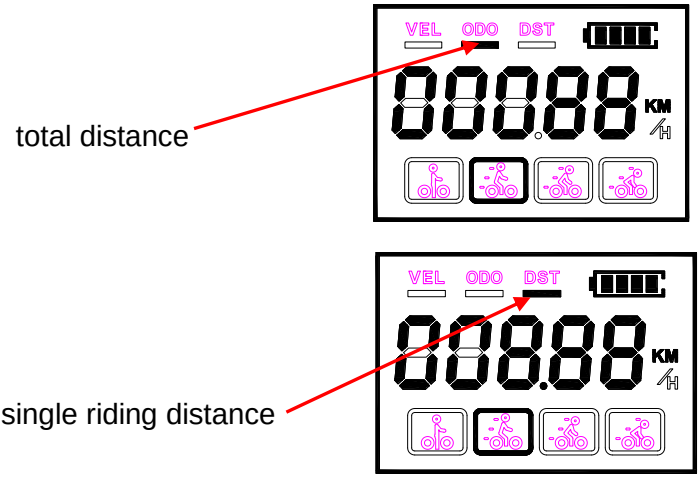
battery capacity is normal, the four battery segments lighten according to actual capacity. When the battery is under voltage, four battery segments switch off and battery display frame will flash with the frequency of 1 HZ, to remind user to recharge battery immediately.



2.7.5 Speed and mileage switch

When power on, display shows the current speed automatically. Hold 3s switch to total distance. Hold the 3s again switch to single riding distance. Hold 3s again display will switch back to current speed. Do this in turns and interface is as below:

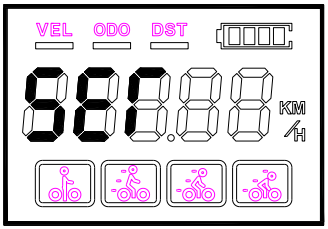




2.8 Parameter setting

Parameter setting includes：wheel diameter setting(8inch～28inch) and battery voltage setting（24V、36V).（The display is set already, do not set it again except the user has special requirements.）

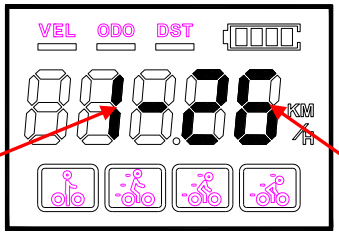
Put the power on，hold MODE and together 3s to go the setting state，the interface is as below:



2.8.1 Wheel size setting

Hold MODE 0.5s to go into the wheel size setting state, hold 0.5s to choose the right wheel size to make sure the speed and distance's

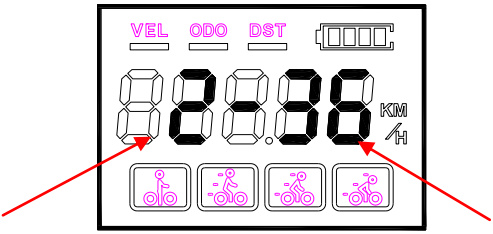
accuracy. Wheel size includes 08、10、12、14、16、18、20、22、26、28，choose in turn，interface is as below：



“"1":wheel size setting mode "26":wheel size

2.8.2 Battery voltage setting

Hold MODE 0.5s to go to voltage setting interface, hold 0.5s to choose right voltage to make sure the display works normally. There are two options of 24V and 36V, choose it in turn, interface is as below:

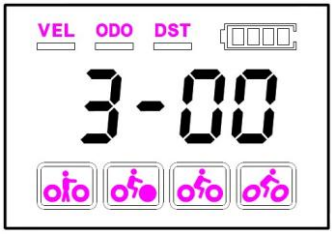


"2":voltage setting mode "36":battery voltage

2.8.3 Single mileage reset

Press MODE 0.5s to go into the single riding distance setting interface, press 0.5s to clear the riding distance to zero, interface is as

below:



"3":riding distance reset

2.8.4 Exit the setting state

In the state of parameter setting, hold

and for 3s to save the current settings and exit the setting interface.

Attention: With no action for 5 seconds, it will exit the setting interface automatically, and the adjustment will not be saved.

2.9 Power off

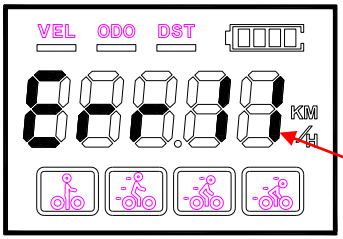
Hold for 3 seconds to switch off display.

Power will be switch off automatically with no action of e-bike for 5 minutes.

Suggestion: Switch off the battery and storage it in a right way, if the e-bike won't be used.

2.10 Malfunction Code

If any errors appeared in electronic control system, the display will show the error code automatically. For example:



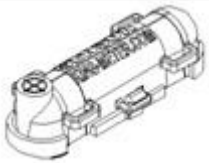
Note: The display can't quit the malfunction code interface until the malfunction is solved. The e-bike can not work when it is in malfunction code display state.

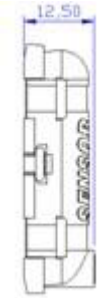
No.	Code	Definition
1	02	chip system abnormality
2	03	hall signal abnormality
3	04	OVP
4	05	UVP
5	06	too hot on controller
6	07	over phase current protection on motor
7	08	too hot on motor
8	09	throttle abnormality /not connected
9	10	brake state
10	11	communication abnormality
11	12	NTC abnormality on motor

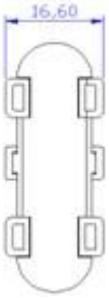
3 Speed detecting sensor

By measuring the wheel RPM, the signal is transferred to the controller, the speed and mileage will be showed on the display.

3.1 Dimension



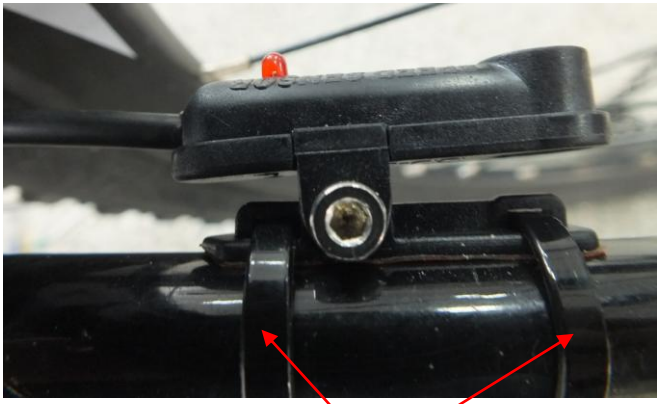




3.2 Installation

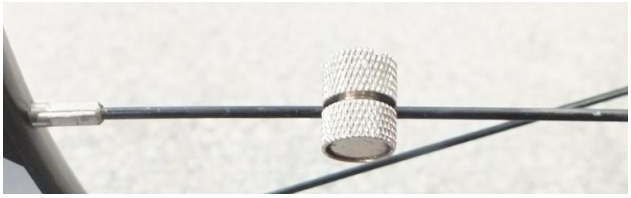
1. Speed sensor component

2. Fix the speed sensor on appropriate position (bottom fork is suggested) of frame by ribbon.



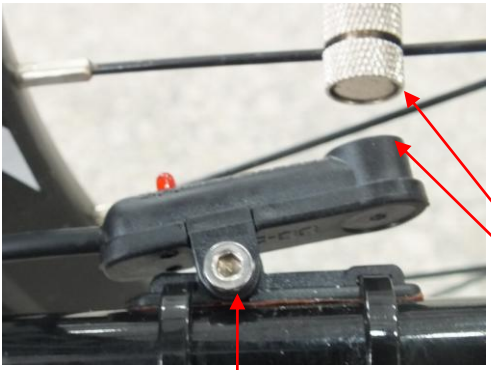
tied by ribbon

3. Fix the magnet on spoke of rear wheel



Note: magnet's surface must be parallelized with sensor's surface

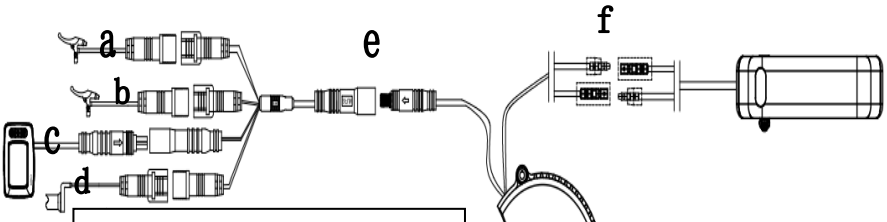
4. Adjust the distance between speed sensor and magnet within 5mm



gap distance ≤ 5mm

fix the nut after adjust appropriate position

4 Connection diagram



a) Brake sensor
b) Brake sensor
c) Display
d) Throttle
e) EB-BUS cable
f) Battery
g) Speed detecting sensor

5 Notes

1.Should be stocked in a dry ventilated warehouse, do not be stocked in a humid, acidic and alkaline area, not coexist with magnetic object

2.Each connector inserted according to arrow to arrow

3.Avoid sharp objects impact on display

4.Avoid overload for long time when using

5.Avoid wading and soaking

6 After service and warranty

Suzhou Bafang Electric Motor Science-Technology Co Ltd (hereinafter to be referred as “Bafang”) warrants that the products bought from Bafang can be provided service freely if the products are non-conformities in material and workmanship within warranty period.

Timing and scope of warranty: Warranty period starts from date of Ex-factory, motor is within 30 months, controller, display, sensor and other electric components is within 18 months.

Bafang limited warranty does not cover or apply to the following:

1) Damage, failure and/or loss caused by refitting, neglect, improper maintenance, competition or commercial purpose, misuse, abuse or accident;

2) Damage, failure and/or loss caused by shipping;

3) Damage, failure and/or loss caused by improper installation, adjusting or repairing.

4) Damage, failure and/or loss irrelevant to material and workmanship, e.g., failure to follow instructions by consumers;

5) Damage, failure and/or loss caused by product’s appearance and surface change which doesn’t affect its function.

6) Damage, failure and/or loss caused by unauthorized service or installation;

7) Damage, failure or loss caused by normal wear and tear.

Bafang reserves the right to repair the components or replace the components, and is only responsible for repairing or replacing of the products.

In case bike manufacturers or dealers encounter quality problems when using or selling Bafang products, they can report the purchase order number and products’ serial number to Bafang technology service department who makes sure that if the products are under warranty or not. If it is under warranty, Bafang will offer repair or replacement for free. If it is out of warranty, Bafang still can

repair for customer, but the concerning material cost, labor cost, freight etc. will be paid by customer.

If you have Bafang components on complete bikes need to be repaired, please contact the bike manufacturer or dealer directly. If this warranty statement is against to Chinese current law, the Chinese law shall prevail. Bafang reserves the right to modify the terms without any announcing in advance.

7 Packing list

Two sets system per carton with packing list:

1.BBS01 motor	2sets
2.display	2sets
3.brake	2sets
4.EB-BUS	2pcs
5.fixing plate	2pcs
6.chain wheel and chain cover	2sets
7.crank	2sets
8.M5*10 nut	10pcs
9.M6*12 nut	4pcs
10.M33 nut	4pcs
11.ST 3.9 nut	10pcs
12.speed detecting sensor	2pcs
13.magnets	2pcs
14.specification	2pcs

Above components list is for reference only, it can be changed with different requirement.